

REMARKS/ARGUMENTS

Claims 11-16 and 19 have been amended, and claims 31-49 have been added. Claims 1-49 are now pending in the application. Applicants respectfully request reexamination and reconsideration of the application.

Applicants acknowledge with appreciation the Examiner's indication that claims 1-10 and 21-30 are allowed.

Claim 14 was rejected under 35 USC § 112. The name SU-8 has been removed from claim 14. It should be noted that this amendment broadens claim 14 to include any photoresist. That is, claim 14 now covers not only SU-8 photoresist but any type of photoresist.

Claims 11-20 have been rejected under 35 USC § 103(a) as obvious in view of US Patent No. 6,103,399 to Smela ("Smela") and US Patent No. 6,452,407 B2 to Khoury ("Khoury"). Applicants respectfully traverse these rejections.

Independent claim 11 describes the recess patterned in the sacrificial layer as having a shape of "a side profile" of the spring contact. Thus, in claim 11, the microelectronic spring contact is made on its side—as opposed to being made in an upright position. (Note that claim 11 describes the base of the spring contact as its bottom and the tip of the spring contact as its top.) In contrast, the contact structures in Smela and Khoury are made in an upright position—that is, they are formed in a recess that defines a top profile of the contact structures. (See Figures 6b through 13b of Smela; and Figures 7A-7R of Khoury.) Therefore, independent claim 11 patentably distinguishes over Smela and Khoury.

It should be noted that the above-described distinction between claim 11 of the instant application, on one hand, and Smela and Khoury, on the other hand, provides certain advantages. For example, forming the spring contact on its side allows for greater flexibility and variation in the shape of the spring contact. That is, it is easier to vary the shape of the spring contact, and many more shapes may be utilized if the spring contact is formed on its side. Therefore, forming a spring contact on its side represents an improvement over Smela and Khoury.

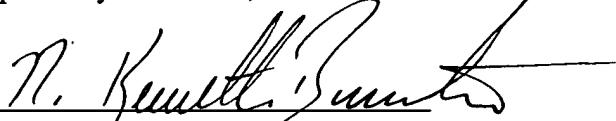
Claims 12-20 depend from claim 11 and therefore also patentably distinguish over Smela and Khoury. In addition, claims 12-20 recite additional features that further distinguish over Smela and Khoury. For example, claim 19 states that an axis extending from the tip to the base of the microelectronic spring contact is substantially parallel to the substrate on which the spring contact is formed but extends away from a second substrate to which the spring contact is later

bonded. As another example, new claim 31 states that first and second portions of the recess define, respectively, a base and tip of the microelectronic spring contact, and the first and second portions are disposed in a plane that is substantially parallel to the substrate. Neither Smela nor Khoury teach or suggest such features. Therefore, dependent claims 12-20 further distinguish over Smela and Khoury.

New independent claim 33 describes forming an interconnect element in an orientation on a sacrificial substrate that is different than the orientation of the interconnect element on a final substrate to which the finished interconnect element will be attached. Although Smela teaches releasing its "multilayer structure" 68 from substrate 60, Smela does not teach attaching the released structure 68 to a final substrate in any different orientation than the structure 68 was in while being formed on substrate 60. Indeed, no changed orientation would make sense because the orientation of Smela's structure 68 while it is being formed on substrate 60 is the only logical orientation for the structure while it is later in actual use. Khoury teaches forming its "contactors" 230 on the same substrate 220 on which the contactors are to be used; Khoury provides no teaching or suggestion that the contactors 230 be released and reattached to a different substrate in a different orientation. Therefore, new independent claim 33, as well as dependent claims 34-49, patentably distinguishes over Smela and Khoury.

In view of the foregoing, Applicants submit that all of the claims are allowable and the application is in condition for allowance. If the Examiner believes that a discussion with Applicants' attorney would be helpful, the Examiner is invited to contact the undersigned at (801) 536-6763.

Respectfully submitted,

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